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10/565,249	06/27/2006	Pedro Stange	02894-742US1	9162

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EXAMINER	
KAYES, SEAN PHILLIP	
ART UNIT	PAPER NUMBER
2833	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/565,249	STANGE ET AL.	
	Examiner	Art Unit	
	SEAN KAYES	2833	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *21-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *21-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 January 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 21-23, 25-29, and 41-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diekmann (US 6916116) in view of Breuer (US 4802255.)

3. With respect to claim 21 Diekmann discloses a method for displaying a time-dependent process, the method comprising:

- applying ("push" 12 figure 1a) a liquid (16 figures 1a-b) onto a porous indicator strip (8, 24, 26, and 30), the strip having a first portion and a second portion opposite the first portion and containing a dye (16 figures 1a-1b; column 10 lines 49-55; the dye is contained within the strip between at least 30 and 38); and
- diffusing the dye along the length of the indicator strip at a predetermined rate (see abstract and column 4 lines 35-53.)

Diekmann does not teach the strip disposed on a toothbrush. Diekmann does teach an adhesive layer (36 figures 1b-c) for attaching the device to various devices with shelf lives.

Breuer teaches timing the shelf-life of a toothbrush, for the purpose of knowing when to replace said toothbrush.

At the time of the invention it would have been obvious to one skilled in the art to use Diekmann's device for timing the usable lifespan of a toothbrush as taught by Breuer. The reason for doing so would be to indicate to a user when it is time to replace a toothbrush as taught by Breuer.

4. With respect to claim 22 Diekmann and Breuer teach the method according to claim 21, further comprising dissolving the dye in the liquid (16 figures 1a-c; column 4 lines 35-53 and 18 and 28 figure 1b) within a storage capsule located adjacent the first portion of the indicator strip.

5. With respect to claim 23 Diekmann and Breuer teach the method according to claim 21, wherein the liquid comprises water (column 10 lines 19-28.)

6. With respect to claim 25 Diekmann and Breuer teach the method according to claim 21, wherein the indicator strip comprises cellulose paper (column 9 lines 25-41.)

7. With respect to claim 26 Diekmann and Breuer teach the method according to claim 22, wherein the liquid is applied to the second portion of the indicator strip (8 and 24 figure 1b.)

8. With respect to claim 27 Diekmann and Breuer teach the method according to claim 22, further comprising applying the liquid (16 figure 1b) to the indicator strip from the storage capsule (14, 20, and 30 figure 1b.)

9. With respect to claim 28 Diekmann and Breuer teach the method according to claim 27, further comprising opening the capsule by applying mechanical pressure ("push" 12 figure 1a) to a flexible cladding substantially surrounding the indicator strip and the capsule.

10. With respect to claim 29 Diekmann and Breuer teach the method according to claim 27, further comprising opening the capsule by actuating a pressure pin (86 figures 2b and 2b") arranged adjacent the capsule (column 22 lines 37-57 discuss how pressure resistant hollow tube/pin {86 figure 2b} is brought into contact with the reservoir 62 so as to achieve an open pathway by means of the hollow passageway of the pin {94 figure 2b.})

11. With respect to claim 41 Diekmann and Breuer teach the method of claim 1 wherein the strip is impregnated with the dye (column 10 lines 49-55 discusses using a dye in combination with the liquid. The diffusion of this liquid and dye through the strip is consistent with the terminology "impregnate".)

12. With respect to claim 42 Diekmann and Breuer teach the method of claim 1 wherein the strip is printed with the dye (column 10 lines 49-55 discusses using a dye in combination with the liquid. The application of the dye through the strip particular as it is pressed through the predefined structures {8 figure 1b; 86 figure 2a1; and 56 figure b} to define predetermined printed structures {86 and 56 figures 2a-2b} is consistent with the terminology "printed" as required by the claim.)

13. With respect to claim 43 Diekmann and Breuer teach the method of claim 1 wherein the strip has been conditioned to cause molecules of the dye to adhere to the strip (the dye would inherently adhere to the various surfaces of the device. Moreover, after the normal operation of the device the exposure of the diffusion liquid to the atmosphere by way of aperture, 23 figure 1b, would dry the liquid leaving the suspended dye adhering to the various internal surfaces. Moreover, claim 1 from which this claim depends requires diffusion of the dye, thus even a transient or momentary adherence of the dye must be consistent with the limitations.)

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 30-35, 37-40, and 44-45 are rejected under 35 U.S.C. 102(b) as being anticipated by Diekmann (US 6916116.)

16. With respect to claim 30 Diekmann discloses a display device for a toothbrush (the reference to a toothbrush is a statement of intended use and subsequently is given little patentable weight), the device comprising:

- a capsule (14 figure 1b) to store a liquid (16 figure 1b) and comprising a seal (20 figure 1b) for controllable release of the liquid; and
- a porous indicator strip (8, 24, and 32 figure 1b) disposed adjacent to the capsule, the indicator strip having a display surface (6 and 8 figure 1a), a first portion (left portion figure 1b) adjacent the capsule and a second portion (right portion figure 1b) opposite the first portion, the indicator strip comprising a dye (16 figure 1b; column 10 lines 49-55; the opposing portions of the strip enclose the dye/liquid portion), the indicator strip being configured so that molecules of the dye adhere to the indicator strip (the dye would inherently adhere to the various surfaces of the device. Moreover, after the normal operation of the device the exposure of the diffusion liquid to the atmosphere by way of aperture, 23 figure 1b, would dry the liquid leaving the suspended dye adhering to the various internal surfaces. Moreover, this claim requires diffusion of the dye, thus even a transient or momentary adherence of the dye must be consistent with the limitations.)
- wherein the indicator strip is configured to diffuse the dye (16 figure 1b) to from the first portion (left side figure 1b) toward the second portion (right side figure

1b) at a predetermined rate and form a line of demarcation along the indicator strip (see abstract; column 4 lines 35-53; and figures 1a, 1a', and 1a".)

17. With respect to claim 31 Diekmann discloses the device of claim 30, further comprising a scale (item 10 figure 1a; "0" through "3" figure 1a) located adjacent the indicator strip to provide an indication of elapsed time.

18. With respect to claim 32 Diekmann discloses the device according to claim 30, wherein the dye is dissolved in the liquid of the storage capsule (16 figure 1b; and column 10 lines 49-55.)

19. With respect to claim 33 Diekmann discloses the device according to claim 30, wherein the dye is disposed along the second portion of the indicator strip (44 and 46 figure 1a".)

20. With respect to claim 34 Diekmann discloses the device according to claim 30, wherein the device is configured to introduce the liquid (28 figure 1b) from the capsule to the dye (16 figure 1b) along the indicator strip (14, 18, and 8 figure 1b; figures 1a, 1a', and 1a".)

21. With respect to claim 35 Diekmann discloses the device according to claim 30, wherein the liquid comprises water (column 10 lines 19-28.)

22. With respect to claim 37 Diekmann discloses the device according to claim 30 wherein the indicator strip comprises cellulose filter paper (column 9 lines 25-41.)

23. With respect to claim 38 Diekmann discloses the device according to claim 30, further comprising a protective cladding (30, 32, and 22 figure 1b) substantially surrounding the indicator strip and the capsule.

24. With respect to claim 39 Diekmann discloses the device according to claim 38, further comprising a mechanical pressure device (20 and 30 figure 1b; "push" 12 figure 1a; and 14 and 16 figures 1a-1b) arranged on an opposite side of the indicator strip facing away from the display surface configured to actuate and burst the capsule.

25. With respect to claim 40 Diekmann discloses a toothbrush comprising:

- a capsule (14 figure 1b) to store a liquid (16 figure 1b) and comprising a seal (20 figure 1b) for controllable release of the liquid; and
- a porous indicator strip (8, 32, and 24 figure 1b) disposed adjacent to the capsule, the indicator strip having a display surface (6 and 8 figure 1a; and figures 1a, 1a', and 1a"), a first portion (left side figures 1a-b) adjacent the capsule and a second portion (right side figures 1a-b) opposite the first portion, the indicator strip comprising a dye (16 figures 1a-1b; and column 10 lines 49-55) the indicator strip being configured so that molecules of the dye adhere to the

indicator strip (the dye would inherently adhere to the various surfaces of the device. Moreover, after the normal operation of the device the exposure of the diffusion liquid to the atmosphere by way of aperture, 23 figure 1b, would dry the liquid leaving the suspended dye adhering to the various internal surfaces. Moreover, this claim requires diffusion of the dye, thus even a transient or momentary adherence of the dye must be consistent with the limitations.);

- wherein the indicator strip (8, 18, 22, and 32 figure 1b) is configured to diffuse the dye to from the first portion (left) toward the second portion (right) at a predetermined rate and form a line of demarcation along the indicator strip to indicate elapsed time (see abstract; column 4 lines 35-53; and figures 1a, 1a', and 1a".)

26. With respect to claim 44 Diekman discloses the method of claim 30 wherein the strip is impregnated with the dye (column 10 lines 49-55 discusses using a dye in combination with the liquid. The diffusion of this liquid and dye through the strip is consistent with the terminology "impregnate". Likewise the inclusion of the dye in the liquid in the prior to diffusion is similarly consistent with the terminology "impregnate".)

27. With respect to claim 45 Diekman discloses the method of claim 30 wherein the strip is printed with the dye (column 10 lines 49-55 discusses using a dye in combination with the liquid. The application of the dye through the strip particular as it is pressed through the predefined structures {8 figure 1b; 86 figure 2a1; and 56 figure b} to

define predetermined printed structures {86 and 56 figures 2a-2b} is consistent with the terminology "printed" as required by the claim.)

Claim Rejections - 35 USC § 103

28. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

29. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diekmann (US 6916116) in view of Breuer (US 4802255) in further view of Ko (US 7294379.)

30. With respect to claim 24 Diekmann and Dreuer teach the method according to claim 21.

Diekman does not teach wherein the dye comprises Erythrosin B or Coomassie Brilliant Blue.

Diekman does, however, teach using a blue organic dye (column 10 lines 49-55.) Commassie brilliant blue and Erythrosin B are particular examples of blue organic dyes. Ko teaches a similar timing device that utilizes Erythrosin as the dye (column 17 lines 23-45; particularly line 39.)

At the time of the invention it would have been obvious to one skilled in the art to choose a particular blue organic dye for use in Diekmann's device. At the time of the invention it would have been obvious to one skilled in the art to choose Erythrosin as

the blue dye for use in Diekman's timing device as taught by Ko. The reason for doing so would be to select a particular dye for use in Diekmann's device so as to construct the device.

31. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diekmann (US 6916116) in view of Ko (US 7294379.)

With respect to claim 36 Diekman discloses the device according to claim 30.

Diekman does not teach wherein the dye comprises Erythrosin B or Coomassie Brilliant Blue.

Diekman does, however, teach using a blue organic dye (column 10 lines 49-55.)

Commassie brilliant blue and Erythrosin B are particular examples of blue organic dyes.

Ko teaches a similar timing device that utilizes Erythrosin as the dye (column 17 lines 23-45; particularly line 39.)

At the time of the invention it would have been obvious to one skilled in the art to choose a particular blue organic dye for use in Diekmann's device. At the time of the invention it would have been obvious to one skilled in the art to choose Erythrosin as the blue dye for use in Diekman's timing device as taught by Ko. The reason for doing so would be to select a particular dye for use in Diekmann's device so as to construct the device.

Response to Arguments

32. Applicant's arguments filed 5/30/2008 have been fully considered but they are not persuasive.

33. Applicant asserts that Diekmann does not teach "the strip ... containing a dye" as required by the claims. This argument is not persuasive. Diekman does teach the use of a dye in combination with the strip (column 10 lines 49-55.) The elements of the strip enclose (entirely) the dye containing portion.

34. Applicant continues to states that Diekmann only teaches the dye used in combination with the liquid. This argument is not persuasive. Applicant is narrowly interpreting the claims..

Claim 1 recites "the strip having a first portion and a second portion opposite the first portion and containing a dye; and diffusing the dye along the length of the indicator strip at a predetermined rate." Diekmann teaches the use of a dye (column 10 lines 49-55.) This dye is diffused along the length of the indicator strip at a predetermined rate. The strip figures 2a-2b contains/encloses the dye within it (figure 2b).

35. Applicant asserts that Breuer does not disclose "a strip containing a dye." This is not persuasive. Breuer teaches "Novel, improved filaments for brushes. The filaments include a colored region provided by a dye colorant" (abstract.)

36. Applicant asserts that Diekmann does not teach the new limitations of claims 30 and 40 which recites "molecules of the dye adhere to the indicator strip." This argument is not persuasive. Adhesion of the dye molecules to the various surfaces of the strip is inherent in the structure disclosed by Diekmann. Moreover, the claims require diffusion

of the dye along the strip. Thus even a transient adherence of the molecules to the strip must be consistent with the claim limitations.

Conclusion

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SEAN KAYES whose telephone number is (571) 272-8931. The examiner can normally be reached on 11:00am to 9:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee Luebke can be reached on (571) 272-2009. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Felix O. Figueroa/
Primary Examiner, Art Unit 2833

SK
7/18/2008